

# INTRODUCTION

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## INTRODUCTION

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The proposed action evaluated within this Final Staff Assessment (FSA)/Draft Environmental Impact Statement (DEIS) is the construction and operation of the Ivanpah Solar Electric Generating System (ISEGS) project, a proposed solar-thermal electricity generation facility located on public lands managed by the Bureau of Land Management (BLM) in San Bernardino County, California. The FSA/DEIS represents a joint environmental review document developed by the California Energy Commission (Energy Commission) and BLM to evaluate potential impacts associated with the proposed action.

When considering an energy project for licensing, the Energy Commission is the lead state agency for evaluating environmental impacts of a proposed licensing action under the California Environmental Quality Act (CEQA). The FSA, the result of the Energy Commission staff's environmental evaluation process, is functionally equivalent to the preparation of an Environmental Impact Report.

Because the proposed project is located on public lands managed by the BLM, BLM is the lead federal agency for evaluating environmental impacts of the proposed right-of-way grant under the National Environmental Policy Act (NEPA). The DEIS is the BLM's environmental evaluation of the potential impacts that could result from the authorization of the requested right-of-way. The Department of Energy (DOE) is a cooperating agency on this FSA/EIS pursuant to an MOU between DOE and BLM signed in February 2009.

In August, 2007, the Energy Commission and BLM California Desert District (CDD) entered into a Memorandum of Understanding (MOU) to jointly develop the environmental analysis documentation for solar thermal projects which are under the jurisdiction of both agencies. The purpose of the MOU is to avoid duplication of staff efforts, share staff expertise and information, promote intergovernmental coordination, and facilitate public review. Under the guidelines of the MOU, the Energy Commission developed the Preliminary Staff Assessment (PSA), which was published on December 9, 2008. The PSA was available for a 30-day public comment period. This document represents the Energy Commission's FSA, as well as the BLM's DEIS. Following a 90-day public comment period, BLM will issue a Final EIS.

This FSA/DEIS is a staff document. It is neither a document of the California Energy Commission Siting Committee, a draft decision by the Siting Committee, nor a decision document approving the right-of-way grant by BLM. The FSA/DEIS describes and evaluates the following:

- the proposed project;
- the existing environment;

- whether the facilities can be constructed and operated safely and reliably in accordance with applicable laws, ordinances, regulations, and standards (LORS);
- the environmental consequences of the proposed project including potential public health and safety impacts;
- the potential cumulative impacts of the proposed project in conjunction with other existing and known planned developments;
- mitigation measures proposed by the applicant, staff, interested agencies, local organizations, and interveners which may lessen or avoid potential impacts;
- the proposed conditions under which the project should be constructed and operated, if it is certified (known as “conditions of certification”); and
- alternatives to the proposed project.

The analyses contained in this FSA/DEIS are based upon information from the: 1) Application for Certification (AFC), 2) responses to data requests, 3) supplementary information from local, state, and federal agencies; interested organizations; and individuals, 4) existing documents and publications, 5) independent research, and 6) comments at workshops. The FSA/DEIS presents conclusions about potential environmental impacts and conformity with LORS, as well as proposed conditions of certification/mitigation measures that apply to the design, construction, operation, and closure of the facility. Each proposed condition of certification/mitigation measure is followed by a proposed means of verification that the condition has been met.

## **BACKGROUND**

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BrightSource Energy is a U. S. Corporation whose business model includes the development and deployment of concentrating solar power tower technology. It has formed limited liability corporations Solar Partners I, II, IV, and VIII (referred to as applicant or BrightSource Energy hereafter) for the purposes of filing ROW applications with the BLM for the use of public land and for filing an Application for Certification with the Energy Commission. BrightSource Energy has executed Power Purchase Agreements with Pacific Gas and Electric and interconnection agreements with Southern California Edison to deliver 400 MW of electricity to the California market by the year 2013.

Through the limited liability corporations, the applicant has applied for four ROW grants from the BLM to construct the ISEGS project that will occupy 4073 acres of public land, use approximately 100 acre feet of water per year, produce a nominal 400 MWs of electricity, and operate for a term of 50 years. BrightSource has also filed an Application for Certification with the Energy Commission. Under California law, the Energy Commission has regulatory authority for certifying applications for thermal power generating facilities in excess of 50 megawatts in size.

Additionally, BrightSource has applied to the U.S. Department of Energy (DOE) for a loan guarantee pursuant to Title XVII of the EPAct. The application for a loan guarantee for Ivanpah 1 was made in November 2008, and the application for Ivanpah 2 and 3 was made in February 2009. The EPAct established a Federal loan guarantee program

for eligible energy projects that employ innovative technologies. Title XVII of EPAct authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that “avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued”. The two principal goals of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. DOE can comply with the requirements under EPAct by selecting eligible projects that meet the goals of the Act. DOE is using this NEPA process to assist in determining whether to issue a loan guarantee to BrightSource Energy to support the proposed project.

The proposed project could help meet the explicit policy goals of the State of California and the Federal goals of producing 10% of the nation’s electricity from renewable sources by 2012 and 25% by 2025 and of approving 10,000 MW of non-hydropower renewable energy generated from the public lands by 2015. Authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the “production and transmission of energy in a safe and environmentally sound manner.”
- The Energy Policy Act of 2005 (EPAct), which requires the Department of the Interior (BLM’s parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015. Currently, proposed renewable energy projects amounting to 1,900 MW of electricity are on file with the BLM within the Ivanpah Dry Lake area, including 400 MW associated with the proposed Project.
- Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior".

## **AGENCY AUTHORITIES AND RESPONSIBILITIES**

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The Energy Commission has the exclusive authority to certify the construction, modification, and operation of thermal electric power plants 50 megawatts (MW) or larger. The Energy Commission certification is in lieu of any permit required by state, regional, or local agencies and by federal agencies to the extent permitted by federal law (Pub. Resources Code, § 25500). The Energy Commission must review power plant AFCs to assess potential environmental impacts including potential impacts to public health and safety, potential measures to mitigate those impacts (Pub. Resources Code, § 25519), and compliance with applicable governmental laws or standards (Pub. Resources Code, § 25523 (d)). The Energy Commission staff’s analyses were prepared in accordance with Public Resources Code, section 25500 et seq.; Title 20, California Code of Regulations, section 1701 et seq.; and CEQA (Pub. Resources Code, § 21000 et seq.).

The Bureau of Land management’s authority for the proposed action includes Federal Land Policy and Management Act (FLPMA) of 1976 [43 United States Code (U.S.C.) 1701 et seq.], Section 211 of the Energy Policy Act (EPAct) of 2005 (119 Stat. 594,

600), and BLM's Solar Energy Development Policy of April 4, 2007. The FLPMA authorizes BLM to issue right-of-way grants for renewable energy projects. Section 211 of the Energy Policy Act of 2005 states that the Secretary of the Interior should seek to have approved a minimum of 10,000 megawatts of renewable energy generating capacity on public lands by 2015.

Title XVII of EAct authorizes the Secretary of Energy to make loan guarantees for eligible projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued." BrightSource Energy has applied to the U.S. Department of Energy (DOE) for a loan guarantee pursuant to Title XVII of the EAct. DOE is participating in the review of this NEPA document as a cooperating agency (40 CFR §1508.5) to ensure that analyses needed to support its decisionmaking on whether to provide a loan guarantee to BrightSource Energy are provided in the EIS.

## **PROJECT DESCRIPTION (CASE AND PROPERTY DESCRIPTION)**

The proposed action is designated by BLM as ROW serial numbers CACA 48668, CACA 49504, CACA 49503, and CACA 49502.

The site is located in Townships 16 and 17 North, Range 14 East, Dan Bernardino Meridian, approximately 4.5 miles southwest of Primm, Nevada in San Bernardino County, California. The property proposed for the rights-of-way grants comprises 3,712.7 acres of long-term (life of facility) disturbance, and 359.9 acres of temporary disturbance, for a total of 4,073 acres.

### Long-term Acreages:

#### Legal Description

San Bernardino Principal Meridian

#### Solar Partners II, LLC CACA-49504

Ivanpah 1 Site

T. 16 N. R. 14 E.,

Sec. 2: Lots 2, 3, 4, and SW $\frac{1}{4}$ NE $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$

Sec. 3: Lots 1, 2, and S $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$

Sec. 10: NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$

Sec. 11: W $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$

#### Solar Partners I, LLC CACA-48668

Ivanpah 2 Site

T. 17 N., R. 14 E.,

Sec. 27: SW $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$

Sec. 28: SE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$

Sec. 33: E $\frac{1}{2}$ , E $\frac{1}{2}$ W $\frac{1}{2}$

Sec. 34: W $\frac{1}{2}$ E $\frac{1}{2}$ , W $\frac{1}{2}$

### Solar Partners VIII, LLC CACA-49503

Ivanpah 3 Site

T. 17 N., R.14 E.,

Sec. 20: E $\frac{1}{2}$ , E $\frac{1}{2}$ W $\frac{1}{2}$

Sec. 21: All

Sec. 22: W $\frac{1}{2}$ W $\frac{1}{2}$

Sec. 27:W $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$

Sec. 28: N $\frac{1}{2}$ , SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$

Sec. 29: E $\frac{1}{2}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$

### Solar Partners IV, LLC CACA-49502

Administrative Site and Substation

T. 16 N., R. 14 E.,

Sec. 3: NW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$

Sec. 4: E $\frac{1}{2}$ NE $\frac{1}{4}$

T.17 N., R.14 E.,

Sec. 34: S $\frac{1}{2}$ SW $\frac{1}{4}$

### Temporary Acreages:

#### Legal Description

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San Bernardino Principal Meridian

Temporary Construction Logistics Area

T. 16 N., R. 14 E.,

Sec. 3: W $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$

Sec. 4: NE $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$

T. 17 N., R. 14 E.,

Sec. 33: SE $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$

Sec. 34: S $\frac{1}{2}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$

## **APPLICANT OBJECTIVES**

The applicant's project objectives are set forth below. The fundamental objective is to build a solar project that generates 400 MW of renewable solar energy that will help the State meet its Renewable Portfolio Standard goals for new renewable electric generation. To assist in meeting the requirement for additional generating capacity, the Applicant (BrightSource) has developed solar technology which requires commercial-scale development to demonstrate its technical and commercial viability, and has entered into power purchase agreements to provide power from renewable sources into the California Independent System Operator (CAISO) system.

1. To safely and economically construct and operate a nominal 400-MW, solar generating facility in California capable of selling competitively priced renewable energy consistent with the needs of California utilities.
2. To demonstrate the technical and economic viability of Bright Source's technology in a commercial-scale project.

3. To locate the facility in areas of high solararity with ground slope of less than 5 percent.
4. To minimize infrastructure needs and reduce environmental impacts by locating the plant near existing and planned infrastructure, including: CAISO transmission lines, a source of natural gas, and an adequate water supply.
5. To avoid siting the plant in areas that are highly pristine or biologically sensitive (e.g., a Desert Wildlife Management Area).
6. To locate the project consistent with existing land use plans. If on public land, to comply with the multiple use objectives of the Federal Land Policy and Management Act (FLPMA), which includes renewable energy development, and the objectives of the California Desert Conservation Area (CDCA) Resource Management Plan (RMP), which allows for solar energy development in some areas.
7. To assist California in repositioning its generation asset portfolio to use more renewable energy in conformance with State Policy, including the policy objectives set forth in Senate Bill (SB) 1078 (California Renewable Portfolio Standard Program) and Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006).
8. To comply with provisions of the power sales agreement in negotiation for the first projects, to develop a project that can interconnect to a CAISO transmission line with the potential of achieving a commercial on-line date in 2010, but no later than 2011.

## **CEQA OBJECTIVES**

### **State Objectives**

Senate Bill 1078, passed on 2002, established the California Renewable Portfolio Standard (RPS), which requires utilities to increase their sale of electricity produced by renewable energy sources, including solar facilities, by a minimum of one percent per year with a goal of 20 percent of their total sales by 2017. However, the California Public Utilities Commission, Energy Commission, and the California Power Authority adopted the Energy Action Plan (EAP), which pledged that the agencies would meet an accelerated goal of 20% by the year 2010. As a result, the California Senate passed Senate Bill 107 to be consistent with the EAP, and accelerated the implementation of RPS, requiring utilities to meet the goal of 20 percent renewable energy generation by 2010. In November 2008, California's Governor instituted Executive Order S-14-08 which establishes an updated RPS goal that all retail sellers of electricity shall serve 33% of their load with renewable energy by 2020. The Ivanpah Dry Lake area has been identified as an area with high potential for solar resource development. The Project would allow California utilities to increase the percentage of renewable resources in their energy portfolio, and aid the utilities in reaching the goals set forth by the RPS.

CEQA guidelines require a clearly written statement of objectives to guide the lead agency in developing a reasonable range of alternatives and aid decision-makers in preparing findings or a statement of overriding considerations. CEQA specifies that the statement of objectives should include the underlying purpose of the project (Section

15126.6(a)). These objectives reflect the applicants objectives and the BLM's stated purpose and need of the Project and will be considered in the comparison of alternatives, as required under both NEPA and CEQA. The Energy Commission developed the following objectives for the Project:

1. to safely and economically construct and operate a nominal 400-MW, renewable power generating facility in California capable of selling competitively priced renewable energy consistent with the needs of California utilities;
2. to locate the facility in areas of high solarity with ground slope of less than 5 percent;
3. to complete the impact analysis of the project by the first quarter of 2010 so that if approved, construction could be authorized in 2010 and beyond.

## **BLM PURPOSE AND NEED**

National Environmental Policy Act (NEPA) guidance published by the Council on Environmental Quality (CEQ) states that environmental impact statements' Purpose and Need section "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 CFR §1502.13). The following discussion sets forth the purpose of, and need for, the project as required under NEPA.

The purpose of the proposed action is to approve, approve with modifications, or disapprove ROW applications filed by Solar Partners I, LLC; Solar Partners II, LLC; Solar Partners IV, LLC; and Solar Partners VIII, LLC (applicant), which are subsidiaries of BrightSource Energy, Inc. to develop the Ivanpah Solar Electric Generating System (ISEGS) project. The BLM will determine and disclose the environmental impacts of the 400 MW ISEGS proposal and decide whether granting the requested ROW is in the public interest. The BLM has determined that the proposed solar project and associated ROW would require an amendment to the CDCAPlan (Plan). The BLM will also consider the amendment of the CDCA Plan to allow for the project.

The need for the action has its basis in Federal orders and laws that require government agencies to evaluate energy generation projects and facilitate the development of renewable energy sources. The proposed project could help meet the explicit policy goals of the State of California and the Federal goals of producing 10% of the nation's electricity from renewable sources by 2012 and 25% by 2025 and of approving 10,000 MW of non-hydropower renewable energy generated from the public lands by 2015. Authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
- The Energy Policy Act of 2005 (EPAAct), which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy

on public lands by 2015. Currently, proposed renewable energy projects amounting to 1,900 MW of electricity are on file with the BLM within the Ivanpah Dry Lake area, including 400 MW associated with the proposed Project.

- Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior".

## **DOE PURPOSE AND NEED**

The EAct of 2005 established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of the EAct of 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued".

The two purposes of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with its mandate under EAct by selecting eligible projects that meet the goals of the Act.

## **LAND USE PLAN CONFORMANCE AND AMENDMENT (BLM)**

The principal land use plan affecting this proposed project is the U.S. Bureau of Land Management's (BLM) California Desert Conservation Area (CDCA) Plan of 1980, as amended, and the Northern and Eastern Mojave Desert Management Plan (NEMO), which amends the CDCA Plan for those areas identified as the northern and eastern Mojave Desert. In the CDCA Plan, the location of the proposed ISEGS facility includes land that is classified as Multiple-Use Class L (Limited Use). The Plan states that solar power facilities may be allowed within Limited Use areas after NEPA requirements are met. This DEIS acts as the mechanism for complying with those NEPA requirements.

Because solar power facilities are an allowable use of the land as it is classified in the CDCA Plan, the proposed action does not conflict with the Plan. However, Chapter 3, "Energy Production and Utility Corridors Element" of the Plan also requires that newly proposed power facilities that are not already identified in the Plan be considered through the Plan Amendment process. The proposed ISEGS facility is not currently identified within the Plan, and therefore a Plan Amendment is required to include the facility as a recognized element within the Plan.

***Other Agency Plans.*** In March, 2008, the BLM entered into a Memorandum of Understanding (MOU; BLM Agreement No. 08-223) with San Bernardino County to establish a cooperative process for conducting environmental reviews of proposed projects located on BLM-managed lands located within the County. Under the terms of the MOU, the BLM acts as the lead agency for NEPA evaluation of each proposed project. The County acts as the CEQA lead agency, except in cases involving thermal energy projects that exceed 50 MW in size, in which case the Energy Commission is designated as the lead and the County acts as a cooperating agency. For this proposed

project, the Energy Commission is the lead agency for CEQA, and an analysis of conformance with applicable San Bernardino County land use plans is included within the **Land Use** section of this FSA/DEIS.

Land within San Bernardino County is classified according to Land Use Zoning Designations under the San Bernardino County General Plan, and Land Use Zoning Districts under the County Development Code. The Development Code implements the General Plan by regulating the use of land within unincorporated portions of the County. The Development Code identifies the land area of the proposed ISEGS facility as Resource Conservation (RC), a designation that allows use for electric power generation. Therefore, the proposed project conforms to the applicable County General Plan.

### **Planning Criteria (BLM)**

The CDCA Plan planning criteria are the constraints and ground rules that guide and direct the development of the Plan Amendment. They ensure that the Plan Amendment is tailored to the identified issues and ensure that unnecessary data collection and analyses are avoided. They focus on the decisions to be made in the Plan Amendment, and will achieve the following:

“Sites associated with power generation of transmission not identified in the Plan will be considered through the Plan Amendment process.”

Because the proposed facility is not currently identified within the CDCA Plan, an amendment to identify the proposed facility within the Plan is hereby proposed. As specified in Chapter 7, Plan Amendment Process, there are three categories of Plan Amendments, including:

- Category 1, for proposed changes that will not result in significant environmental impact or analysis through an Environmental Impact Statement;
- Category 2, for proposed changes that would require a significant change in the location or extent of a multiple-use class designation; and
- Category 3, to accommodate a request for a specific use or activity that will require analysis beyond the Plan Amendment Decision.

Based on these criteria, approval of the proposed project would require a Category 3 amendment. This section summarizes the procedures necessary to evaluate the proposed Plan Amendment, as well as the procedures required to perform the environmental review of the right-of-way (ROW) application.

***Statement of Plan Amendment.*** The Implementation section of the Energy Production and Utility Corridors Element of the CDCA Plan lists a number of Category 3 amendments that have been approved since adoption of the Plan in 1980. An additional amendment is proposed to be added to this section of the Plan, and would read “Permission granted to construct solar energy facility (proposed Ivanpah Solar Electric Generating System).”

**Plan Amendment Process.** The Plan Amendment process is outlined in Chapter 7 of the Plan. In analyzing an applicant's request for amending or changing the Plan, the BLM District Manager, Desert District, will:

1. Determine if the request has been properly submitted and if any law or regulation prohibits granting the requested amendment.
2. Determine if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification, or an amendment to any Plan element.
3. Determine the environmental effects of granting and/or implementing the applicant's request.
4. Consider the economic and social impacts of granting and/or implementing the applicant's request.
5. Provide opportunities for and consideration of public comment on the proposed amendment, including input from the public and from federal, State, and local government agencies.
6. Evaluate the effect of the proposed amendment on BLM management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection.

**Decision Criteria for Evaluation of Proposed Plan Amendment.** The Decision Criteria to be used for approval or disapproval of the proposed amendment require that the following determinations be made by the BLM Desert District Manager:

1. The proposed amendment is in accordance with applicable laws and regulations;
2. The proposed amendment will provide for the immediate and future management, use, development, and protection of the public lands within the CDCA.

The BLM Desert District Manager will base the rationale for these determinations on the principles of multiple use, sustained yield, and maintenance of environmental quality as required in the Federal Land Policy and Management Act (FLPMA) of 1976.

**Decision Criteria for Evaluation of Application.** In addition to defining the required analyses and Decision Criteria for Plan Amendments, the Plan also defines the Decision Criteria to be used to evaluate future applications in the Energy Production and Utility Corridors Element of Chapter 3. These Decision Criteria include:

1. Minimize the number of separate rights-of-way by utilizing existing rights-of-way as a basis for planning corridors;
2. Encourage joint-use of corridors for transmission lines, canals, pipelines, and cables;
3. Provide alternative corridors to be considered during processing of applications;

4. Avoid sensitive resources wherever possible;
5. Conform to local plans whenever possible;
6. Consider wilderness values and be consistent with final wilderness recommendations;
7. Complete the delivery systems network;
8. Consider ongoing projects for which decisions have been made; and
9. Consider corridor networks which take into account power needs and alternative fuel resources.

***Factors to be Considered.*** The Plan also states that, in the evaluation of proposed power plants, BLM will use the same factors affecting the public lands and their resources as those used by the Energy Commission. These factors are the environmental information requirements defined in the California Code of Regulations (CCR) Title 20, Appendix B, and include:

- General (Project Overview)
- Cultural Resources
- Land Use
- Noise
- Traffic and Transportation
- Visual Resources
- Socioeconomics
- Air Quality
- Public Health
- Hazardous Materials Handling
- Worker Safety
- Waste Management
- Biological Resources
- Water Resources
- Soils
- Paleontological Resources
- Geological Hazards and Resources
- Transmission System Safety and Nuisance
- Facility Design
- Transmission System Design

- Reliability
- Efficiency

The specific determinations required for the Plan Amendment evaluation are discussed in detail below. This DEIS acts as the mechanism for evaluating both the proposed project application, and the proposed Plan Amendment. The factors specified in CCR Title 20, Appendix B are included within the scope of the analysis presented in the DEIS.

## **Results of CDCA Plan Amendment (BLM)**

### **Required Determinations**

1. Determine if the request has been properly submitted and if any law or regulation prohibits granting the requested amendment.

The applicant's request for a right-of-way was properly submitted, and this DEIS acts as the mechanism for evaluating and disclosing environmental impacts associated with that applications. No law or regulation prohibits granting the amendment.

2. Determine if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification, or an amendment to any Plan element.

The CDCA Plan does not currently identify any sites as solar generating facilities. Therefore, there is no other location within the CDCA which could serve as an alternative location without requiring a Plan Amendment. The proposed project does not require a change in the Multiple-Use Class classification for any area within the CDCA.

1. Determine the environmental affects of granting and/or implementing the applicant's request.

This DEIS acts as the mechanism for evaluating the environmental effects of granting the right-of-way and the Plan Amendment.

2. Consider the economic and social impacts of granting and/or implementing the applicant's request.

This DEIS acts as the mechanism for evaluating the economic and social impacts of granting the right-of-way and the Plan Amendment.

3. Provide opportunities for and consideration of public comment on the proposed amendment, including input from the public and from federal, State, and local government agencies.

A Notice of Intent (NOI) to amend the CDCA Plan was published in the Federal Register November 6, 2008, Vol. 72, No. 214 Fed. Reg.62671-62672. Three respondents, all government agencies, provided comments during the 30-day NOI scoping period. Although not part of BLM's required NEPA or Plan Amendment process, public comments were also received on the Preliminary Staff Assessment (PSA) published by the Energy Commission in December, 2008. In response to the PSA, 13 respondents

provided comments. These included government agencies, environmental organizations, and individuals with no stated affiliation. In accordance with the NOI, issues identified during the scoping period are placed in the comment categories below.

1. Issues to be resolved in the plan amendment

One commenter who provided comments on the PSA expressed concern that the proposed project was not in conformance with the CDCA Plan, and that such conformance should be achieved before the project would be approved. This comment is being resolved through this Plan Amendment.

2. Issues to be resolved through policy or administrative action

All other comments received addressed specific environmental impacts and mitigation measures that each commenter requested be analyzed in the FSA/DEIS. These comments are being resolved by being considered within this DEIS.

3. Issues beyond the scope of this plan amendment

No comments were received which were outside of the scope of this Plan Amendment.

1. Evaluate the effect of the proposed amendment on BLM management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection.

The balance between resource use and resource protection is evaluated within the DEIS. Title VI of the FLPMA, under California Desert Conservation Area, provides for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and maintenance of environmental quality. Multiple use includes the use of renewable energy resources, and through Title V of FLPMA, the BLM is authorized to grant rights-of-way for generation and transmission of electric energy. The acceptability of use of public lands within the CDCA for this purpose is recognized through the Plan's approval of solar generating facilities within Multiple-Use Class L. The purpose of the DEIS is to identify resources which may be adversely impacted by approval of the proposed project, evaluate alternative actions which may accomplish the purpose and need with a lesser degree of resource impacts, and identify mitigation measures and Best Management Practices (BMPs) which, when implemented, would reduce the extent and magnitude of the impacts and provide a greater degree of resource protection.

### **Conformance of ROW Application with Decision Criteria (BLM)**

1. Minimize the number of separate rights-of-way by utilizing existing rights-of-way as a basis for planning corridors.

The proposed project assists in minimizing the number of separate rights-of-way by being proposed in close proximity to existing Corridors D and BB. Electrical transmission associated with the proposed project will occur within these existing

corridors, and placement of the facility adjacent to these corridors minimizes the length of new corridors necessary for transmission of natural gas to the site.

1. Encourage joint-use of corridors for transmission lines, canals, pipelines, and cables.

Placement of the proposed project adjacent to existing Corridor D maximizes the joint-use of this corridor for natural gas and electrical transmission.

2. Provide alternative corridors to be considered during processing of applications.

This decision criterion is not applicable to the proposed project. Placement of the proposed facility adjacent to existing corridors does not require designation of alternative corridors to support the proposed project.

3. Avoid sensitive resources wherever possible;

The extent to which the proposed project has been located and designed to avoid sensitive resources is addressed throughout the DEIS. BLM and other Federal regulations that restrict the placement of proposed facilities, such as the presence of designated Wilderness Areas or Desert Wildlife Management Areas were considerations in the original siting process used by the applicant to identify potential project locations. The project location and configurations of the boundaries were modified in consideration of mineral resources. The alternatives analysis considered whether the purpose and need of the proposed project could be achieved in another location, but with a lesser effect on sensitive resources.

4. Conform to local plans whenever possible;

The extent to which the proposed project conforms to local plans is addressed within the Land Use section of the DEIS. The proposed project is in conformance with the San Bernardino County General Plan.

5. Consider wilderness values and be consistent with final wilderness recommendations;

The proposed project is not located within a designated Wilderness Area or Wilderness Study Area.

6. Complete the delivery systems network;

This decision criterion is not applicable to the proposed project.

7. Consider ongoing projects for which decisions have been made; and

This decision criterion is not applicable to the proposed project. Approval of the proposed project would not affect any other projects for which decisions have been made.

8. Consider corridor networks which take into account power needs and alternative fuel resources.

This decision criterion is not applicable to the proposed project. The proposed project does not involve the consideration of an addition to or modification of the corridor

network. However, it does utilize facilities located within Corridors D and BB, which were designed with consideration of both power needs and locations of alternative fuel resources.

## **PROJECT EVALUATION AND DECISION PROCESS**

### **Energy Commission Process**

The Energy Commission's siting regulations require staff to independently review the AFC and assess whether the list of environmental impacts contained is complete and whether additional or more effective mitigation measures are necessary, feasible, and available (Cal. Code Regs., tit. 20, §§ 1742 and 1742.5(a)).

In addition, staff must assess the completeness and adequacy of the measures proposed by the applicant to ensure compliance with health and safety standards and the reliability of power plant operations (Cal. Code Regs., tit. 20, § 1743(b)). Staff is required to develop a compliance plan (coordinated with other agencies) to ensure that applicable laws, ordinances, regulations, and standards are met (Cal. Code Regs., tit. 20, § 1744(b)).

Staff conducts its environmental analysis in accordance with the requirements of the California Environmental Quality Act (CEQA). No additional Environmental Impact Report (EIR) is required because the Energy Commission's site certification program has been certified by the California Resources Agency as meeting all requirements of a certified regulatory program (Pub. Resources Code, § 21080.5 and Cal. Code Regs., tit. 14, § 15251 (j)).

Staff's impact assessment, including the recommended conditions of certification, is only one piece of evidence that the Siting Committee will consider in reaching a decision on the proposed project and making its recommendation to the full Energy Commission. At the public hearings, all parties will be afforded an opportunity to present evidence and to rebut the testimony of other parties, thereby creating a hearing record on which a decision on the project can be based. The hearing before the Siting Committee also allows all parties to argue their positions on disputed matters, if any, and it provides a forum for the Committee to receive comments from the public and other governmental agencies.

Following the hearings, the Siting Committee's recommendation to the full Energy Commission on whether or not to approve the proposed project will be contained in a document entitled the Presiding Members' Proposed Decision (PMPD). Following its publication, the PMPD is circulated in order to receive written public comments. At the conclusion of the comment period, the Siting Committee may prepare a revised PMPD. At the close of the comment period for the revised PMPD, the PMPD is submitted to the full Energy Commission for a decision.

### **BLM Process**

The DEIS is available for a 90-day public comment period. Following completion of that period, BLM will review and develop responses to comments provided by the public and other agencies. The responses to the comments, and other information identified during

this period, will be incorporated into a Final EIS (FEIS), which will make a recommendation regarding the preferred alternative. A Notice of Availability (NOA) of the FEIS will be published when the FEIS becomes available for public review. The FEIS will be available for public review for a minimum of 30-days before the BLM issues a Record of Decision (ROD). The decision regarding the ROW grant is in full force and effect, however it is appealable to the Interior Board of Land Appeals upon issuance of the ROD. The FEIS will also contain a proposed decision to amend the BLM Plan. Proposed plan amendment decisions may be protested within 30-days of the proposed decision. BLM cannot make a final decision regarding issuance of a ROW grant or amending the Plan until any Plan protest is resolved.

Under the NEPA process, the significance of the impacts are developed based on the definition of “significantly” provided in NEPA regulations Section 1508.27. This evaluation includes both the context of the action with respect to the affected resources, as well as the intensity of the effect on those resources. The following are considered in evaluating the intensity:

- Whether the impact is beneficial or adverse;
- The degree to which the proposed action affects public health or safety;
- Unique characteristics of the geographic area, including parks, farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- The degree to which the effects are likely to be highly controversial;
- The degree to which the effects are highly uncertain or involve unique or unknown risks;
- The degree to which the action may establish a precedent for future actions;
- Whether the action may be individually insignificant, but cumulatively significant when combined with other actions;
- The degree to which the action may adversely affect significant scientific, cultural, or historical resources;
- The degree to which the action may adversely affect an endangered or threatened species or its habitat; and
- Whether the action threatens a violation of federal, State, or local law or requirements imposed for the protection of the environment.

As outlined in NEPA regulations Section 1502.16, the analysis also includes a discussion of both direct and indirect effects and their significance, adverse environmental effects which cannot be avoided, whether impacts are short-term or long-term, and any irreversible or irretrievable commitments of resources.

The decisions to be made by the agencies (licensing by the Energy Commission, and right-of-way grant by BLM) are independent of each other.

## **DOE Process**

When the FEIS is completed and made available to the public by BLM, DOE will carry out an independent review to ensure that DOE comments have been addressed and that the proposed action is substantially the same as the action described in the EIS. If these conditions are met, DOE will adopt the FEIS without recirculating it pursuant to CEQ NEPA regulations at 40 CFR 1506.3(c).

While the FEIS is being developed, DOE will also be carrying out a detailed technical and legal evaluation of the proposed project pursuant to its procedures for loan guarantees set out at 10 CFR Part 609. DOE may reach agreement on a conditional commitment for a loan guarantee prior to completion of the FEIS and the BLM ROW grant; however, in this case a condition precedent will be included in the conditional commitment requiring that the NEPA review and the BLM ROW grant process be completed before DOE closes the loan guarantee transaction.

Following conclusion of the NEPA process and the BLM decision on issuance of the ROW grant, DOE will issue a Record of Decision (ROD) and proceed to close the loan guarantee transaction provided that the applicant has satisfied all the detailed terms and conditions contained in the conditional commitment and other related documents, and all other contractual, statutory, and regulatory requirements.

## **Agency Coordination**

As noted previously, the Energy Commission certification is in lieu of any permit required by state, regional, or local agencies and by federal agencies to the extent permitted by federal law (Pub. Resources Code, § 25500). However, both the Commission and BLM typically seek comments from and work closely with other regulatory agencies that administer LORS that may be applicable to the proposed project. The following paragraphs describe the agency coordination that has occurred through this joint SA/EIS process.

### **U.S. Army Corps of Engineers**

The U.S. Army Corps of Engineers (USACE) has jurisdiction to protect water quality and wetland resources under Section 404 of the Clean Water Act. Under that authority, USACE reviews proposed projects to determine whether they may impact such resources, and/or be subject to a Section 404 permit. Throughout the FSA/DEIS process, the Energy Commission, BLM, and the applicant have provided information to the USACE to assist them in making a determination regarding their jurisdiction and need for a Section 404 permit. The USACE rendered a final opinion on May 28, 2009 concluding that the project does not affect waters of the U.S., and thus does not require such a permit.

### **National Park Service**

The National Park Service manages the Mojave National Preserve (MNP), which is located near the proposed project area. Because of the proximity of the MNP, the Park Service has been invited to participate in scoping meetings and public workshops, and has been provided the opportunity review and provide comment on the PSA and FSA/DEIS.

## **U.S. Fish and Wildlife Service**

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction to protect threatened and endangered species under the Endangered Species Act (ESA). Formal consultation with the USFWS under Section 7 of the ESA is required for any federal action that may adversely affect a federally-listed species. The desert tortoise (*Gopherus agassizii*), which occurs in the proposed project area, is a federally-listed threatened species, and therefore formal consultation with the USFWS is required. This consultation has been initiated through the preparation and submittal of a Biological Assessment (BA) which describes the proposed project to the USFWS. Following review of the BA, the USFWS is expected to issue a Biological Opinion (BO) which will specify mitigation measures which must be implemented for the protection of the desert tortoise.

## **State Water Resources Control Board/Regional Water Quality Control Board**

The Lahontan Regional Water Quality Control Board (RWQCB) has the authority to protect both surface water and groundwater resources at the proposed project location. Throughout the FSA/DEIS process, the Energy Commission, BLM, and the applicant have invited the RWQCB to participate in public scoping and workshops, and have provided information to assist the agency in evaluating the potential impacts and permitting requirements of the proposed project. The RWQCB has responded by providing comments that have been evaluated and incorporated into the FSA/DEIS analysis. The agency has also made a determination that the proposed project would impact waters of the state, and has specified conditions to satisfy requirements of a dredge and fill permit/waste discharge requirements. These requirements will be included as a recommended Condition of Certification/Mitigation Measure.

## **California Department of Fish and Game**

The California Department of Fish and Game (CDFG) has the authority to protect water resources of the state through regulation of modifications to streambeds, under Section 1602 of the Fish and Game Code. The Energy Commission, BLM, and the applicant have provided information to CDFG to assist in their determination of the impacts to streambeds, and identification of permit and mitigation requirements. The applicant filed a Streambed Alteration Agreement with CDFG on June 2, 2009. The requirements of the Streambed Alteration Agreement will be included as a recommended Condition of Certification/Mitigation Measure.

CDFG also has the authority to regulate potential impacts to species that are protected under the California Endangered Species Act (CESA). On May 22, 2009, the applicant filed an application for authorization for incidental take of the desert tortoise under Section 2081(b) of the CESA. The requirements of the Incidental Take Permit will be included as a recommended Condition of Certification/Mitigation Measure.

## **Tribal relationships**

The BLM has notified affected Indian Tribes regarding the proposed project, has sought their comments and has invited them to consult on the project on a government-to-government basis.

## **County of San Bernardino**

On March 18, 2008, the BLM California Desert District entered into an MOU with the County of San Bernardino to coordinate environmental reviews for renewable energy projects on public land within the County. Under this MOU, BLM will invite the County to become a cooperating agency for EISs, and will provide opportunities for County staff to review and participate in technical discussions and analyses. San Bernardino County has requested cooperating agency status pursuant to the MOU. BLM has provided the County with project-related documentation for their review and evaluation.

## **Public Coordination**

Both the Energy Commission's CEQA-equivalent process and the BLM's NEPA process provide opportunities for public participation in the scoping of the environmental analysis, and in the evaluation of the technical analyses and conclusions of that analysis. For the Energy Commission, this outreach program is primarily facilitated by the Public Adviser's Office (PAO). As part of the coordination of the environmental review process required under the Energy Commission/BLM California Desert District MOU, the agencies have jointly held public meetings and workshops which accomplish the public coordination objectives of both agencies. This is an ongoing process that to date has involved the following efforts.

## **Libraries**

The AFC was sent to the main county libraries in San Bernardino, Barstow, Fresno, and Eureka; the main branches of the San Diego and San Francisco public libraries; the University Research Library at UCLA; the California State Library, and the Energy Commission's library in Sacramento.

## **Outreach Efforts**

The PAO's public outreach is an integral part of the Energy Commission's AFC review process. The PAO reviewed information provided by the applicant and also conducted its own outreach efforts to identify and locate local elected and certain appointed officials, as well as "sensitive receptors" (including schools, community, cultural and health facilities and daycare and senior-care centers, as well as environmental and ethnic organizations). There were not any sensitive receptors identified within a six-mile radius of the proposed site for the project.

Notices for workshops and hearings have been and will continue to be distributed to those agencies, individuals, and businesses that are currently on or request to be placed on the project's mailing list. Notices were distributed for the Informational Hearing and Site Visit, which was conducted on January 4, 2008, in Primm, Nevada. An additional Informational Hearing was held, also in Primm, on January 25, 2008.

Coincident with the PAO's outreach efforts, BLM solicited interested members of the public and agencies through the NEPA scoping process. BLM published a Notice of Intent to develop the EIS and amend the CDCA Plan in the Federal Register, Vol. 72, No. 214, page 62671, on November 6, 2007. The Energy Commission's January 4, 2008 Informational Hearing also acted as the Public Scoping meetings for the EIS, as required by NEPA. On January 9, 2009, BLM published notice of an extension of the

public scoping period, and held an additional joint public scoping meeting on January 25, 2008.

Throughout the process, the Energy Commission and BLM have held additional joint Issue Resolution workshops which were announced and made available to the public. These workshops were held on June 23, 2008 in Primm, Nevada, and on July 31, 2009 in Sacramento, California. The Energy Commission has also continued to accept and consider public comments, and has issued orders granting petitions to intervene to six interested groups including Defenders of Wildlife, Sierra Club, Basin and Range Watch, and Center for Biological Diversity (June 2, 2009), California Native Plant Society, and Western Watersheds .

Those agencies and individuals that have provided comments concerning the project have been considered in staff's analysis. This FSA/DEIS provides agencies and the public with an opportunity to review the Energy Commission staff's analysis of the proposed project. Comments received on this FSA/DEIS will be taken into consideration in preparing the subsequent project documents, including the FEIS.

Energy Commission regulations require staff to notice, at a minimum, property owners within 1,000 feet of a project and 500 feet of a linear facility under its jurisdiction. This was done for the ISEGS project. Staff's ongoing public and agency coordination activities for this project are discussed under the Public and Agency Coordination heading in the **Executive Summary**.

The AFC, the PSA, this FSA/DEIS, and other project documents are located on the Energy Commission's website at <http://www.energy.ca.gov/sitingcases/ivanpah/index.html>.

### **Summary of Public and Agency Comments**

The BLM and Energy Commission processes include soliciting comments regarding the scope of the analysis from other government agencies, the public, and non-governmental organizations. The persons and organizations which provided scoping comments, and the general issues addressed within their comments, are provided in **Introduction Table 1** below.

Following the publication of the PSA, the Energy Commission received comments on the scope, analytical methodology, and conclusions from other government agencies, the public, and non-governmental organizations. A summary of the comments received on the PSA is provided in **Introduction Table 2** below.

**Introduction Table 1 - Scoping Comments Received**

<b>Date</b>	<b>Name, Title, Association/ Location</b>	<b>Issue addressed within Comment</b>
Oct. 18,2007	Mack Hakakian, PG, Engineering Geologist, California Regional Water Quality Control Board Lahontan Region	Impacts to surface Water of the State and/or Water of the U.S, pre and post construction stormwater management, Water Quality Certification, Design features (runoff and drainage), Wastewater Discharge
Oct. 25, 2007	Curt Shifrer, Water Resources Control Engineer, California Regional Water Quality Control Board Lahontan Region	Groundwater Quality, Wastewater Discharge, Aboveground Surface Irrigation system, Sub-surface irrigation system
Sept. 26, 2007	Carrie Hyke, AICP, Principal Planner, San Bernardino County Land Use Service Department Advance Planning Division, Environmental & Mining Section, County of San Bernardino Public and Support Services Group, Department of Public Works	Biological Impacts, Cultural Resources, Fire Hazards, Groundwater
Jan. 23, 2009	Alice Bond, Regional Program Coordinator, The Wilderness Society, California/Nevade Regional Office Alex Daue, Renewable Energy Coordinator, The Wilderness Society, BLM Action Center Johanna Wald, Senior Attorney, Natural Resources Defense Council	Encourages agency (Energy Commission and BLM) coordination in ROW permitting application. Addresses characteristics conducive to utility-scale development within the project area. Impacts to Natural, Cultural and Visual Resources, Air Quality. Public Benefits (relating to Greenhouse Gas Emissions)
June 22,2009	Sidney Silliman, San Gorgonio Chapter and Desert Committee, Sierra Club	Designation of Areas of Critical Environmental Concern, retire Clark Mountain Grazing Allotment, Alternative Site Analysis (Site Relocation)

**Introduction Table 2 - Comments Received on Preliminary Staff Assessment**

<b>Date</b>	<b>Name, Title, Association/ Location</b>	<b>Issue addressed within Comment</b>
Jan. 5, 2009	Nancy Sansonetti, AICP, S.C., Principal Planner/Chief Planning & Permitting Section, County of San Bernardino Public and Support Services Group, Department of Public Works	Sufficiency of the environmental analysis.
Jan. 14, 2009	Jenny Wilder, Apple Valley, Ca.	Groundwater, Assessment of Alternative Locations, Energy Production efficiency

Jan. 14, 2009	Craig Deutsche, Sacramento, Ca.	Habitat and Wildlife (Desert Tortoise), Mitigation
Jan. 14, 2009	George Kerr, Wildlife and Habitat Coordinator, Society for the Conservation of Bighorn Sheep	Impacts to Bighorn Sheep and their habitat
Jan. 21, 2009	David Lamfrom, California Desert Field Representative, National Parks Conservation Association	Supports the efforts in using dry cool technology, as well as, for ensuring the public a right to participate in the NEPA/CEQA process. Desert Tortoise
Jan. 22, 2009	Lynn Davis, Fallbrook, Ca.	Impacts to Bird, Animal and Plant Species, Mitigation, Groundwater
Jan. 22, 2009	Sidney Silliman, San Gorgonio Chapter and Desert Committee, Sierra Club	Biological Resources (Animal and Plant Species), Habitat, Visual Resources, Supports the Private Land Alternative
Jan. 23, 2009	Alice Bond, Regional Program Coordinator, The Wilderness Society, California/Nevade Regional Office Alex Daue, Renewable Energy Coordinator, The Wilderness Society, BLM Action Center Johanna Wald, Senior Attorney, Natural Resources Defense Council	Encourages agency (Energy Commission and BLM) coordination in ROW permitting application. Addresses characteristics conducive to utility-scale development within the project area. Impacts to Natural, Cultural and Visual Resources, Air Quality. Public Benefits, Greenhouse Gas Emissions
Jan. 23, 2009	Teresa M. Arnold, AICP , Airport Planning Manager, Las Vegas, McCarran International Airport	Impacts to Jean Sport Aviation Center and proposed Southern Nevada Supplemental Aviation (SNSA), Glare, Thermal Effects, Military Training Routes, Ivanpah Lands Act
Jan. 23, 2009	Kim Delfino, California Program Director, Defenders of Wildlife Joshua Basofin, California Representative, Defenders of Wildlife	Habitat, Endangered Species (Animal and Plant Species), Cumulative Impacts, Assessment of Alternatives
Jan. 30, 2009	Tasha La Doux, Ph.D., Kelso, Ca.	Light Pollution, Impacts to Plant and Animal Species, Economy (Tourism)
Jan. 31, 2009	Kevin Emmerich, Basin and Range Watch Laura Cunningham, Basin and Range Watch	Power Generation (natural gas), Air Quality, Greenhouse Gas Emmsions, Biological Resources (Endangered Species), Species Monitoring, Hazardous Materials Management (Waste Disposal, noxious weed management), Land Use, Wastewater, Detention Pond management, Groundwater (Impacts to Water Quality), Erosion Control, Visual Impacts

## ORGANIZATION OF THE DOCUMENT

The FSA/DEIS begins with an Executive Summary, Introduction, Proposed Action Alternative/Project Description, Alternatives, and Cumulative Scenario. The environmental, engineering, and public health and safety analyses of the proposed project are contained in 22 separate chapters. They include the following: Air Quality, Biological Resources, Cultural Resources and Native American Values, Hazardous Materials Management, Land Use, Noise and Vibration, Public Health and Safety, Socioeconomics and Environmental Justice, Soil and Water Resources, Traffic and Transportation, Transmission Line Safety and Nuisance, Visual Resources, Waste Management, , Worker Safety and Fire Protection, Geology, Paleontology and Minerals, Livestock Grazing, Wild Horses and Burros, Recreation, Facility Design, Power Plant Efficiency, Power Plant Reliability, and Transmission System Engineering. These chapters are followed by the general project conditions and a summary of agency and public comments. This is followed by a list of staff who contributed to the document and a reference list.

Each of the 22 technical area assessments includes a discussion of:

- laws, ordinances, regulations and standards (LORS);
- the regional and site-specific setting;
- project direct and indirect impacts;
- mitigation measures;
- closure and decommissioning impacts and mitigation;
- no project/no action alternative;
- cumulative impacts;
- noteworthy public benefits;
- response to public and agency comments on the PSA;
- conclusions and recommendations; and
- mitigation measures/conditions of certification for both construction and operation (as applicable).